Reply Comments to the ARRL Comments on WT04-140 specifically section III Expanded Authorization of HF Emission Types

The ARRL comments assume that transmitting digital image emissions in the RTTY/Data subbands of the 80 through 10 meter bands is the main thrust of the Mark Miller petition. While the Mark Miller petition supports transmitting images using digital emissions, the intention is to include analog emissions. The ARRL proposed change to 97.3(c) (2)

Data. Telemetry, telecommand and computer communications emissions including images having designators with A, C, D, F, G, H, J or R as the first symbol; 1 as the second symbol; D as the third symbol; and emission J2D. Only a digital code of a type specifically authorized in this part may be transmitted.

does not make technical sense. Part 97 defines image in 97.3(c) (3) as

Facsimile and television emissions having designators with A, C, D, F, G, H, J or R as the first symbol; 1, 2 or 3 as the second symbol; C or F as the third symbol; and emissions having B as the first symbol; 7, 8 or 9 as the second symbol; W as the third symbol.

It is clear that fixed images are facsimile as defined in part 2.1(c) of the FCC rules.

Facsimile. A form of telegraphy for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form.

Fixed image emissions whether digital or analog will have a C as the third symbol in the emissions designator.

The ARRL also comments that their version of 97.3(c)(2) "would have the effect of permitting digital images to be transmitted in a computer communication within the existing symbol rates, which are given in §97.307(f). It would not include analog images, as analog emissions would be inhomogeneous with the digital emissions in the segments where CW, RTTY and data emissions are permitted." Restricting analog images to 500 Hz removes the inharmonious emissions concern. The ARRL is incorrect that imposing a specific bandwidth limitation in the definitions section of the rules constitutes an unnecessary limitation with respect to 97.3(c)(2). The 80 through 10-meter bands are the only bands that segregate image emissions. The proposed definition of data would classify image emissions less than 500Hz in occupied bandwidth as data emissions thus allowing those image emissions in the Data/RTTY subband in the 80 through 10-meter bands. In the other bands where image emissions are not segregated, image emissions would fall under the present definition of image in 97.3(c)(3). I agree that this is a complicated way of solving the problem. The original Mark Miller petition suggested modifying Section 97.305(c) of the FCC rules **to** allow an amateur station to transmit an image emission that occupies a bandwidth of 500 Hz or less on the frequency segments of

HF amateur bands now authorized for data and RITY emission types. The actual modification would be in §97.307(f)(3) and would read as follows:

> (3) Only a RTTY or data emission using a specified digital code listed in §97.309(a) of this Part may be transmitted. The symbol rate must not exceed 300 bauds, or for frequency-shift keying, the frequency shift between mark and space must not exceed 1 kHz. Image emissions 500 Hz or less in occupied bandwidth are permitted.

This would remove the ARRL's objection to modifying 97.3(c) (2) while permitting image emissions harmonious with the other emissions in the Data/RTTY subbands in the 80 through 10-meter bands. Since part 97 already defines image, there is no need for further definition.

The FCC in their comments to the Mark Miller petition have decided that the preferred course of action is to modify the definition of data in 97.3(c) (2). If this is in fact the best course of action, then emissions designators must be added to the definition that covers both analog and digital image emissions. The 500Hz occupied bandwidth limitation for image emissions is therefore necessary to preserve the segregation of inharmonious emissions. In the 108 previously filed comments, 33 comments have either fully supported WT 04-140 or supported the Mark Miller petition by name. Only 3 comments have opposed the Mark Miller petition. Several comments have supported widening the list of emissions designators in the proposed FCC change to 97.3(c) (2).

The ARRL also comments "it may be premature to adopt any final plan with respect to this matter in the instant proceeding. ARRL conducted a detailed study of the desirability of regulation of on-air emission types in all Amateur allocations by bandwidth rather than mode of emission". They go on further to say that "ARRL is preparing and intends to submit in the near term a Petition incorporating this approach." This is all well and good, but there is no indication that either the FCC or the amateur radio community would support such rule changes. I have had discussions on amateur radio internet forums and comments through articles I have written that show significant opposition to the ARRL Digital Ad-Hoc committee report and bandwidth segregation in general. I would ask the FCC not to consider delaying action on the Mark Miller petition due to this yet unknown petition to which the ARRL refers.

Finally the main reason for the Mark Miller petition was to allow more than 2000 U.S. amateur radio operators to use features found in the software program MixW. This program was conceived and supported by amateur radio operators world wide. One feature of this program is mixing of a digital data emission (MFSK16) with an analog facsimile emission (less than 500 Hz occupied bandwidth). Amateur radio operators world wide have been enjoying this mode, while U.S. amateur operators are restricted from using this feature of the MixW software because image emissions are not authorized in the Data/RTTY subbands in the 80 through 10 meter bands.

Respectfully yours,

Mark Miller
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